

WHAT IS CLAIMED IS:

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1. A heating device, comprising:

a heating part having at least one heat
generation part generating heat;

an electricity storage device supplying
10 electric power at a variable output voltage to the
heating part, said electricity storage device having at
least one chargeable-dischargeable capacitor;

a control part controlling the output voltage
of the electricity storage device; and

15 a temperature detection part detecting a
temperature of a portion heated by the heat generation
part,

wherein the heat generation part generates
heat by using electric power supplied from the
20 electricity storage device, and when the temperature
detected by the temperature detection part is higher
than or equal to a predefined temperature, the control
part sets a voltage of the capacitor such that said
voltage of the capacitor is lower than or equal to a
25 maximum voltage of the capacitor.

5 2. A fixing device for fixing an image on a
recording medium, comprising:

 a heating device, comprising: a heating part
having at least one heat generation part generating
heat; an electricity storage device supplying electric
10 power at a variable output voltage to the heating part,
said electricity storage device having at least one
chargeable-dischargeable capacitor; a control part
controlling the output voltage of the electricity
storage device; and a temperature detection part
15 detecting a temperature of a portion heated by the heat
generation part, wherein the heat generation part
generates heat by using electric power supplied from the
electricity storage device, and when the temperature
detected by the temperature detection part is higher
20 than or equal to a predefined temperature, the control
part regulates a voltage of the capacitor such that said
voltage of the capacitor is lower than or equal to a
maximum voltage of the capacitor; and

 a fixing part heated by the heat generation
25 part,

wherein the recording medium passes in contact with or near the fixing part.

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3. An image forming apparatus, comprising:
 - a fixing device for fixing an image on a recording medium, comprising: a heating device
 - 10 comprising: a heating part having at least one heat generation part generating heat; an electricity storage device supplying electric power at a variable output voltage to the heating part, said electricity storage device having at least one chargeable-dischargeable
 - 15 capacitor; a control part controlling the output voltage of the electricity storage device; and a temperature detection part detecting a temperature of a portion heated by the heat generation part, wherein the heat generation part generates heat by using electric power
 - 20 supplied from the electricity storage device, and when the temperature detected by the temperature detection part is higher than or equal to a predefined temperature, the control part regulates a voltage of the capacitor such that said voltage of the capacitor is lower than or
 - 25 equal to a maximum voltage of the capacitor; and a

fixing part heated by the heat generation part, wherein the recording medium passes in contact with or near the fixing part,

wherein the temperature detection part is
5 disposed in an interior of the image forming apparatus,
and when a temperature of the interior is higher than or
equal to a predefined temperature, the control part
regulates a voltage of the capacitor such that said
voltage of the capacitor is lower than or equal to a
10 maximum voltage of the capacitor.

15 4. An image forming apparatus, comprising:
a fixing device for fixing an image on a
recording medium, comprising: a heating device
comprising: a heating part having at least one heat
generation part generating heat; an electricity storage
20 device supplying electric power at a variable output
voltage to the heating part, said electricity storage
device having at least one chargeable-dischargeable
capacitor; a control part controlling the output voltage
of the electricity storage device; and a mode detection
25 part detecting an operational mode of the image forming

apparatus, wherein the heat generation part generates heat by using electric power supplied from the electricity storage device, and when the operational mode detected by the mode detection part is a save mode, 5 the control part regulates a voltage of the capacitor such that said voltage of the capacitor is lower than or equal to a maximum voltage of the capacitor; and a fixing part heated by the heat generation part, wherein the recording medium passes in contact with or near the 10 fixing part.

15 5. A fixing device for fixing a toner on a sheet, comprising:

at least one electricity storage device;
a heat generation part generating heat by using electric power supplied from the electricity 20 storage device;
a fixing member heating the toner on the sheet to fix the toner on the sheet, said fixing member heated by the heat generation part; and
a power control part controlling to supply 25 electric power from not an external power source but the

electricity storage device to the heat generation part.

5 6. The fixing device as claimed in claim 5,
wherein the electricity storage device comprises a
capacitor.

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7. The fixing device as claimed in claim 5,
wherein the power control part controls to supply
electric power from not the external power source but
15 the electricity storage device to the heat generation
part at start time of power supply thereto.

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8. The fixing device as claimed in claim 5,
wherein the power control part, when the unheated fixing
member is heated to a toner fixable temperature,
supplies electric power from not the external power
25 source but the electricity storage device to the heat

generation part.

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9. The fixing device as claimed in claim 5, wherein the power control part, when a temperature of the fixing member drops due to passage of one or more sheets, supplies electric power from not the external power source but the electricity storage device to the heat generation part.

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10. The fixing device as claimed in claim 5, wherein the power control part comprises:

a selection part alternately selecting one of a first mode and a second mode, said first mode in which electric power is supplied from not the external power source but the electricity storage device to the heat generation part, said second mode in which electric power is supplied from not the electricity storage device but the external power source to the heat generation part.

5 11. The fixing device as claimed in claim 5,
wherein the power control part comprises:

 a selection part alternately selecting one of
a first mode and a second mode, said first mode in which
electric power is supplied from not the external power
10 source but the electricity storage device to the heat
generation part, said second mode in which electric
power is supplied from both of the electricity storage
device and the external power source to the heat
generation part.

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 12. The fixing device as claimed in claim 5,
20 wherein the heat generation part comprises a plurality
of heaters, and at least one of the plurality of heaters
is connected to the electricity storage device and the
external power source to receive electric power from at
least one of the electricity storage device and the
25 external power source.

13. An image forming apparatus, comprising:
- 5 a fixing device for fixing a toner on a sheet, comprising: at least one electricity storage device; a heat generation part generating heat by using electric power supplied from the electricity storage device; a fixing member heating the toner on the sheet to fix the
- 10 toner on the sheet, said fixing member heated by the heat generation part; and a power control part controlling to supply electric power from not an external power source but the electricity storage device to the heat generation part,
- 15 wherein the sheet on which a toner image is formed in accordance with an electrophotographic method is carried to the fixing device.